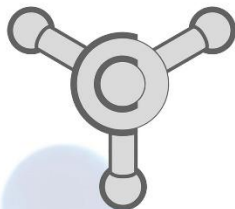


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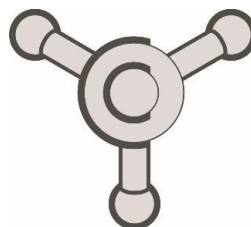
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Chemical analysis

CA PP 02

Elemental composition of non-oak wood extracts commonly used in Balkan cooperage

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In the production of some alcoholic beverages one of the most important practices is the ageing process in a presence of wood. This process contributes to improved sensory characteristics such as aroma, color, taste and astringency. Although oak heartwood is the most used material in cooperage, other species such as chestnut, cherry, and mulberry can be also considered. Currently, limited published data are available on the mineral content of the wood extract from cooperage industry, although some research was done to investigate the content of heavy metals in alcoholic beverages¹, especially in wine². Daily consumption of the wine and brandy with an elevated content of heavy metals might cause chronic poisoning. To avoid this issue, the maximum allowable concentration (MAC, mg L⁻¹) in fruit brandies were established for lead, zinc, arsenium, and copper.¹

The aim of this research was to investigate elemental composition of ethanolic extracts, obtained from alternative wood species used in Balkan cooperage, such as mulberry (*Morus alba* L.), Myrobalan plum (*Prunus cerasifera* Ehrh.), black locust (*Robinia pseudoacacia* L.), and wild cherry (*Prunus avium* (L.) L.). Elements were determined by inductively coupled plasma-optical emission spectroscopy (ICP-OES). Results indicated that the elemental composition of wild cherry extract was much lower than in other non-oak wood extracts, and all investigated wood extracts have lower content of trace elements than maximum allowable concentration in fruit brandies.

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